APPENDIX C Precipitation Distribution Table Depth-Duration-Frequency Table, Intensity-Duration-Frequency

Precipitation Distribution Table

| | 2-year 24 hour Pre | cipitation Distribution | 10-year 24 hour Precipitation Distribution | | |
|-----------------------|--|---|--|---|--|
| Storm Time (hours) | Cumulative Rainfall Amount (Inches) | Incremental Rainfall Amount (inches) | Cumulative Rainfall Amount (inches) | Incremental Rainfall Amount (inches) | |
| 0.0 | 0.000 | 0.000 | 0.000 | 0.000 | |
| | 0.019 | 0.019 | 0.027 | 0.027 | |
| 0.5 | 0.038 | 0.019 | 0.055 | 0.028 | |
| 1.0 | 0.057 | 0.020 | 0.084 | 0.029 | |
| 1.5 | 0.078 | 0.021 | 0.114 | 0.030 | |
| 2.0 | 0.099 | 0.021 | 0.145 | 0.031 | |
| 2.5 | | 0.022 | 0.177 | 0.032 | |
| 3.0 | 0.121 | 0.023 | 0.211 | 0.034 | |
| 3.5 | 0.145 | 0.023 | 0.246 | 0.035 | |
| 4.0 | 0.169 | | 0.283 | 0.037 | |
| 4.5 | 0.194 | 0.025 | 0.322 | 0.039 | |
| 5.0 | 0.221 | 0.027 | | 0.041 | |
| 5.5 | 0.249 | 0.028 | 0.363 | 0.043 | |
| 6.0 | 0.279 | 0.030 | 0.406 | 1 | |
| 6.5 | 0.310 | 0.032 | 0.452 | 0.046 | |
| 7.0 | 0.344 | 0.034 | 0.502 | 0.049 | |
| 7.5 | 0.381 | 0.037 | 0.555 | 0.054 | |
| 8.0 | 0.421 | 0.040 | 0.614 | 0.058 | |
| 8.5 | 0.465 | 0.044 | 0.677 | 0.064 | |
| 9.0 | 0.513 | 0.049 | 0.748 | 0.071 | |
| 9.5 | 0.569 | 0.055 | 0.829 | 0.081 | |
| 10.0 | 0.633 | 0.064 | 0.922 | 0.093 | |
| 10.5 | 0.715 | 0.082 | 1.041 | 0.119 | |
| 11.0 | 0.823 | 0.108 | 1.199 | 0.158 | |
| 11.5 | 0.992 | 0.169 | 1.445 | 0.246 | |
| 12.0 | 2.321 | 1.330 | 3.382 | 1.937 | |
| 12.5 | 2.573 | 0.252 | 3.749 | 0.367 | |
| 13.0 | 2.703 | 0.131 | 3.939 | 0.190 | |
| 13.5 | 2.796 | 0.093 | 4.074 | 0.135 | |
| 14.0 | 2.863 | 0.066 | 4.171 | 0.097 | |
| 14.5 | 2.933 | 0.070 | 4.274 | 0.103 | |
| 15.0 | 2.988 | 0.055 | 4.354 | 0.081 | |
| 15.5 | 3.037 | 0.048 | 4.425 | 0.070 | |
| 16.0 | 3.080 | 0.044 | 4.489 | 0.064 | |
| 16.5 | 3.120 | 0.040 | 4.546 | 0.058 | |
| 17.0 | 3.157 | 0.037 | 4.600 | 0.054 | |
| 17.5 | 3.190 | 0.034 | 4.649 | 0.049 | |
| 18.0 | 3.222 | 0.032 | 4.695 | 0.046 | |
| 18.5 | 3.252 | 0.030 | 4.738 | 0.043 | |
| 19.0 | 3.280 | 0.028 | 4.779 | 0.041 | |
| 19.5 | 3.306 | 0.026 | 4.817 | 0.038 | |
| 20.0 | 3.332 | 0.026 | 4.855 | 0.037 | |
| 20.5 | 3.356 | 0.024 | 4.890 | 0.035 | |
| 21.0 | 3.379 | 0.023 | 4.923 | 0.033 | |
| | 1 | 0.023 | 4.957 | 0.034 | |
| 21.5 | 3.402 | | 4.986 | 0.030 | |
| 22.0 | 3.422 | 0.020 | | 0.030 | |
| 22.5 | 3.443 | 0.021 | 5.016 | 0.029 | |
| 23.0 | 3.462 | 0.020 | 5.045 | 0.029 | |
| 23.5 | 3.481 | 0.019 | 5.073 | 1 | |
| 24.0 | 3.500 | 0.019 | 5.100 | 0.027 | |

| PERTU-DURATION-FREQUENCY | TABLE |
|--------------------------|-------|
| | |

| DURATION | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
|----------|------|------|-------|-------|-------|--------|
| | [in] | [in] | [in] | [in] | [in] | [in] |
| 5 min | 0.47 | 0.54 | 0.60 | 0.68 | 0.75 | 0.81 |
| 10 min | 0.73 | 0.86 | 0.96 | 1.11 | 1.22 | 1.34 |
| 15 min | 0.91 | 1.09 | 1.21 | 1.40 | 1.55 | 1.70 |
| 30 min | 1.26 | 1.54 | 1.74 | 2.04 | 2.27 | 2.49 |
| 60 min | 1.62 | 2.01 | 2.29 | 2.70 | 3.01 | 3.32 |
| 2 hr | 1.83 | 2.28 | 2.60 | 3.06 | 3.42 | 3.78 |
| 3 hr | 2.03 | 2.55 | 2.91 | 3.43 | 3.84 | 4.24 |
| 6 hr | 2.56 | 3.23 | 3.70 | 4.37 | 4.89 | 5.41 |
| 12 hr | 3.03 | 3.84 | 4.40 | 5.21 | 5.83 | 6.46 |
| 24 hr | 3.50 | 4.44 | 5.10 | 6.04 | 6.77 | 7.50 |

INTENSITY-DURATION-FREQUENCY TABLE

| 2-yr 5-yr 10-yr 25-yr 50-yr 100-yr DURATION [in/hr] [i | | | | | | | |
|--|---|--|--|--|--|--|--|
| 5 min 5.86 8.32 7.17 6.64 7.33 8.01 10 min 4.38 5.18 5.77 6.64 7.33 8.01 15 min 3.64 4.34 4.86 5.62 6.21 6.80 30 min 2.52 3.08 3.49 4.07 4.53 4.99 50 min 1.62 2.01 2.29 2.70 3.01 3.32 2 hr 0.91 1.14 1.30 1.53 1.71 1.89 3 hr 0.68 0.85 0.97 1.14 1.28 1.41 6 hr 0.43 0.54 0.62 0.73 0.82 0.90 12 hr 0.25 0.32 0.37 0.43 0.49 0.54 | DURATION | | • | | - · · · · · · · · · · · · · · · · · · · | • | • |
| | 10 min 15 min 30 min 50 min 50 min 3 hr 4 hr 12 hr | 4.38 3.64 2.52 1.62 0.91 0.68 0.43 0.25 | 5.18 4.34 3.08 2.01 1.14 0.85 0.54 | 5.77 4.86 3.49 2.29 1.30 0.97 0.62 0.37 | 6.64 5.62 4.07 2.70 1.53 1.14 0.73 0.43 | 7.33 6.21 4.53 3.01 1.71 1.28 0.82 0.49 | 8.01 6.80 4.99 3.32 1.89 1.41 0.90 |

IDF EQUATIONS

| IDE EGON! | TOMO | | |
|-----------|-----------|--------|----------------------|
| R | g | h | |
| ======== | ========= | ====== | I = g/(h + Td) |
| 2 | 127 | 19 | • |
| 5 | 161 | 21 | VALID ONLY UP |
| 10 | 185 | 22 | TO 2 HOURS |
| 25 | 220 | 23 | |
| 50 | 246 | 24 | Td = duration (mins) |
| 100 | 273 | 24 | |
| | | | |

INPUT

| Duration | 2-yr P [in] | 100-yr P [in] | Source | |
|------------------------------------|------------------------------|------------------|--|---|
| 5 min 15 min 60 min 24 hr | 0.47 0.91 1.62 3.50 | 1.70 3.32 | NDAA HYDRO-3 NDAA HYDRO-3 NDAA HYDRO-3 USWB TP-40 | 5 |

